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EMPIRICAL PAPER

A patient *post hoc* perspective on advantages and disadvantages of blended cognitive behaviour therapy for depression: A qualitative content analysis

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Abstract
Background: Blended cognitive behavioural therapy (bCBT), which combines face-to-face (FtF), and internet-based cognitive behavioural therapy (iCBT), may be a particularly promising approach, but little is known about the effectiveness and patients' subjective evaluations of the bCBT format. The aim of this qualitative study is to explore perceived advantages and disadvantages of bCBT from the patients' perspective in specialized mental health care. **Methods:** Semi-structured interviews were conducted with 15 patients suffering from major depression who underwent treatment in a bCBT format. The interview data were processed by means of a qualitative content analysis. **Results:** The content analysis generated 18 advantages and 15 disadvantages which were grouped into 6 main topics. In general, bCBT was perceived as purposive and effective for treating depression. The patients perceived the combined treatment as complementary and emphasized the advantage of the constant availability of the online programme. Furthermore, a segment analysis revealed that patients reported different advantages and disadvantages of bCBT as a function of the severity of their depressive episode. **Conclusion:** The findings of the present study reveal advantages and disadvantages of bCBT, which should be taken into account in the further implementation of this new treatment format.

Keywords: depression; cognitive-behaviour therapy; Internet; blended treatment; specialized mental care

Clinical or methodological significance of this article: Blended treatment seems to balance missing aspects of stand-alone internet-based and face-to-face treatment for depression. Patients suffering from major depression perceived the blended format as purposive and effective after 18 weeks. Patients with different levels of depression severity may perceive different advantages and disadvantages of blended treatment for depression.

1. Introduction

Depression is one of the most common mental disorders (Gotlib & Hammen, 2008; Mathers, 2008) and leads to substantial health care costs (Whiteford et al., 2013). The lifetime prevalence of depression is about 15% in high-income countries (Kessler & Bromet, 2013) and approximately half of the patients suffering from depression will experience more than one depressive episode over the course of their life (Hardeveld, Spijker, De Graaf, Nolen, & Beekman, 2013).

Different psychological approaches have shown to be effective in the treatment of depression. One of the most widely used psychological treatments for depression is cognitive behavioural therapy (CBT) (Cuijpers et al., 2013; Kendall & Hollon, 2013).

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The goal in CBT is the identification and solving of problems in a manageable time period with different techniques, such as behaviour modification and/or identification and change of negative thought patterns (Beck, 1979). The relationship between therapist and patient seems to play an important role for treatment outcome in CBT and other psychological therapies, and it has been suggested that the formation of a good working alliance is an essential precondition (Lambert & Barley, 2001; Wampold, 2015). In support of this, a meta-analysis showed a significant but moderate association between the quality of the therapeutic alliance and treatment outcome (Horvath, Del Re, Flückiger, & Symonds, 2011).

In many countries it is difficult to gain access to evidence-based depression treatments (Andrews, Issakidis, & Carter, 2001; Johansson & Andersson, 2014) due to shrinking health care budgets and the restricted availability of qualified therapists (Bremmer & Marloes, 2013). Therefore, in the last two decades, internet-based CBT (iCBT) has been developed in order to provide low-threshold and clinical effective treatments (Andersson, 2016). Typically, unguided and guided treatments are distinguished. Whereas in unguided interventions patients work through an internet-based self-help programme on their own, in guided interventions trained experts guide and motivate patients throughout the programme. With regard to depression, iCBT has been shown to be effective (Karyotaki et al., 2017; Richardson & Richards, 2012), and meta-analyses suggest that contact with a trained supporter before and/or during treatment improves effectiveness (Johansson & Andersson, 2014; Spek et al., 2007). Furthermore, recent studies showed that iCBT might be as effective as face-to-face (FtF) treatment for depression (Andersson, Cuijpers, Carlbring, Riper, & Hedman, 2014; Andersson, Topooco, Havik, & Nordgreen, 2016).

Depression treatments in FtF versus online formats have distinctive advantages. For example, among the advantages of an internet-based setting are easy accessibility and constant availability, and the possibility of a regular monitoring of symptom improvements and deteriorations. Advantages of a FtF setting include the possibility of addressing complex comorbidities, tailoring treatment to the individual's needs and supporting process-related components (e.g., discussing thoughts and feelings) (Andersson & Titov, 2014; van der Vaart et al., 2014). However, both formats also have some disadvantages. For example, internet-based treatments may not provide an immediate response to any patient crisis in the treatment (e.g., suicidal intention), they often lack the time structure given in conventional psychotherapy such as weekly sessions, which may reduce the compliance, and non- and paraverbal exchange is missing. On the other hand, disadvantages of FtF settings include higher costs and higher investment of time (Andersson, 2014; Berger & Caspar, 2011).

These reasons have led to the idea that so-called blended treatment (a combination of FtF interventions and iCBT) may be a promising approach to the treatment of depression (Kooistra et al., 2014). A combination of both modalities could increase effectiveness while reducing costs and clinicians' workload (Kleiboer et al., 2016; Krieger et al., 2014; Wright et al., 2002). Furthermore, patients who are more successful at managing their mental health autonomously could receive fewer FtF sessions and more iCBT, whereas patients who need more guidance and human contact could be offered more FtF sessions and less iCBT (van der Vaart et al., 2014). In support of this, results from a proof-of-concept study on the feasibility of a blended form of psychotherapy in a mixed anxious-depressed sample suggested that including internet-based parts in depression treatment yields certain benefits, such as better memory support and learning, better homework completion and greater perceived autonomy and responsibility (Månsson, Ruiz, Gervind, Dahlin, & Andersson, 2013). Another possible advantage of a blended format is that treatment adherence may be improved by the additional use of technology (Robertson, Smith, Castle, & Tannenbaum, 2006; Wright et al., 2005). Lillevoll and colleagues (Lillevoll et al., 2013) analysed by means of a phenomenological-hermeneutic approach interviews of 14 depressive patients after undergoing a treatment consisting of very brief FtF sessions and iCBT. The results showed that patients appreciated the possibility to engage in a dialogue with the therapist (e.g., sharing thoughts and feelings or receiving feedback) which was associated with a more positive treatment outcome. The possibility to talk to the therapists also helped patients to increase their understanding of the principles of CBT and facilitated the transformation of theory to everyday practice.

Currently, there is a growing interest in blended cognitive-behaviour therapy (bCBT) but research has only recently begun (Ruwaard & Kok, 2015). Little is known about efficacy, efficiency, and safety, but also about the optimal way of blending iCBT and FtF treatments in routine care (Kooistra et al., 2014). Interestingly, a recent study found that blended treatment could be even more expensive compared to established FtF treatments because of suboptimal implementation (Kenter et al., 2015).

Consequentially, before finding answers to whether bCBT can save costs or improve

effectiveness, it seems important to obtain more knowledge about patients' experience in a bCBT format. Knowledge of patients' perceptions of this particular format can be helpful to optimize bCBT before implementation in regular care. The aim of this qualitative study was to gain more knowledge about advantages and disadvantages of blended depression treatments from a patients' perspective in specialized mental health care. For this purpose, we developed a semi-structured interview based on previously reported experiences with bCBT (e.g., Lillevoll et al., 2013) and possible advantages and disadvantages of ICBT, FtF and blended treatment to evaluate whether those factors are important or not from a patients' perspective. Furthermore, we conducted an explorative *post hoc* segment analysis to investigate whether perceived advantages and disadvantages differed depending on depression severity.

2. Material and Methods

2.1. Participants and Recruitment

The current qualitative analysis was part of a two-armed pragmatic randomized controlled non-inferiority trial in Switzerland within the framework of the pan-European study "E-COMPARED." The project "E-COMPARED" is implemented in nine European countries and examines the clinical efficacy and cost-effectiveness of usual treatment for depression in comparison to blended treatment in primary and specialized mental health care (Kleiboer et al., 2016). In the Swiss trial conducted in specialized mental health care, participants were recruited directly through private psychotherapy practices or licensed outpatient clinics, through the study homepage (www.online-therapy.ch/depression) and via mass media and advertisements in different Swiss newspapers. Only very few patients contacted one of the psychotherapists working in this study because they read about the study in newspapers or on the Internet, but participants were often acquired by a direct recruitment through the therapists. The sample in the present study consisted of the first 15 consecutively recruited patients suffering from a major depressive episode who were randomized to the blended treatment condition. Importantly, there were no participants who refused or declined the participation. The 8 female (53.3%) and 7 male participants were between 20 and 67 years old ($M = 42.4$; $SD = 14.8$). The majority were married or in a relationship ($n = 10$; 66.7%). Most of the patients indicated a middle (e.g., apprenticeship) ($n = 8$; 53.3%) or high (e.g., university degree) ($n = 6$; 40.0%) educational level. Regarding treatment preferences, a total of nine patients were in favour of receiving bCBT ($n = 9$; 60%) whereas two would have preferred treatment as usual ($n = 2$; 13.4%) and four had no treatment preferences ($n = 4$; 26.7%). Seven (46.7%) patients had a comorbid axis-I disorder in combination with a major depression episode as primary diagnosis and nine participants (60%) had no more axis-I diagnosis at post-assessment. The mean within-group effect size from pre- to- 18-weeks treatment on the primary depression measure (PHQ-9) was at Cohen's $d = 1.8$ (95% CI [−2.63, −0.91]). Eight participants (53%) at post-assessment reached a reliable and clinical significant change (RSCS) according to McMillan, Gilbody, and Richards (2010). One person (6.7%) reported an increase of depressive symptoms on the PHQ-9 at 18-weeks. However, this deterioration was not reliable since it was lower than 5 points (McMillan et al., 2010). The mean number of completed online modules was 6.3 ($SD = 3.17$; range = 0–11 modules) and the mean number of psychotherapy sessions conducted was 8.5 ($SD = 3.9$). In the whole sample one person (6.7%) did not fill out the online questionnaires at post-assessment (18-weeks) but did participate for the semi-structured qualitative interview. The majority of the patients ($n = 12$; 80%) continued with bCBT or standard psychotherapy after the 18-weeks assessment.

2.2. Procedure

All participants provided written informed consent before the inclusion in the study. After returning a written informed consent, participants were invited via e-mail to complete online questionnaires for the pre-assessment. After completing the online questionnaires, the participants were contacted to schedule a telephone-administered MINI International Neuropsychiatric Interview (MINI) diagnostic interview version 5.0 (Ackenheil, Stotz-Ingenlath, Dietz-Bauer, & Vossen, 1999). The MINI interviewers were either members of the study team or trained master students.

Criteria for inclusion were: (1) being 18 years of age or older, (2) meeting diagnostic criteria for Major Depression Disorder (MDD) as confirmed by the MINI (3) a score of 5 or higher on the Patient Health Questionnaire-9 (PHQ-9) (Kroenke, Spitzer, & Williams, 2001). Exclusion criteria were: (1) an increased suicide risk according to the MINI section C, (2) psychiatric comorbidity which required an alternative treatment, such as substance dependence, bipolar disorder, psychotic disorder, or obsessive compulsive disorder, (3) receiving another psychological treatment for depression, (4) insufficient knowledge of German, (5) no smartphone, and (6) no access to the internet.

After completion of the MINI, eligible participants were randomized either to TAU or bCBT. At 18-weeks after randomization, participants were contacted again to complete online questionnaires and a second phone appointment was scheduled. Following the second MINI interview at 18 weeks, a semi-structured interview (see below) was conducted only with participants in the bCBT condition.

The protocol of the study was approved by the Ethics Committee of the Canton of Bern and Zürich, and the trial was registered on 2 April 2015 with clinicaltrials.gov (NCT02410616).

2.3. Blended Cognitive Behavioural Therapy

The bCBT combined face-to-face cognitive behavioural psychotherapy with an adapted version of the internet-based self-help intervention *deprexis*, which has been shown to be effective as a stand-alone treatment in several studies (Beevers et al., 2017; Klein et al., 2016; Meyer et al., 2015). *Deprexis* covers a variety of therapeutic content that is broadly consistent with a cognitive behavioural model. It includes 11 modules, one of them being an introductory and one a summary module. The other nine modules represent different topics such as (1) psychoeducation, (2) behavioural activation, (3) cognitive modification, (4) mindfulness and acceptance, (5) interpersonal skills, (6) relaxation, physical exercise, and lifestyle modification, (7) problem solving, (8) expressive writing and forgiveness, (9) positive psychology, (10) dreamwork and emotion-focused interventions, and (11) relapse prevention.

The communication in the programme is carried out online via simulated dialogues. The patients are required to respond to narrative text passages from the programme in predefined multiple-choice answers enabling the programme to tailor the content to patient's individual preferences (e.g., giving more information on a specific topic or skipping part of the content). Furthermore, it also contains worksheets, audio recordings, summary sheets and brief automatic daily messages, delivered either by SMS or e-mail (for a more detailed description of *deprexis* see Meyer et al., 2009).

The treatment plan provided for a FtF session in one week and an online module in the following week in alternating turns. However, the therapists were free to schedule more or less FtF sessions or to provide more or less online modules according to their clinical judgment. The goal of this blended treatment approach was to allow therapists to focus on more process-related treatment components during the face-to-face sessions, such as patient-specific needs, discussion of thoughts and feelings, and treatment evaluation, while more practical therapy aspects could be delivered in the online sessions (e.g., psychoeducation, homework, and symptom monitoring) which may facilitate the integration in daily life. Therapists also had the possibility to make specific online modules available depending on the individual needs of a patient. The expected duration of the blended treatment was 18 weeks, with one FtF session lasting about 50 minutes. Since it was possible to combine the two formats individually, the number of FtF sessions and the activity on the online platform were registered. Moreover, therapists were asked to complete questionnaires regarding session content after every FtF session. All therapies were conducted by certified CBT therapists or therapists in training under supervision in their clinic workplaces.

2.4. Measures

2.4.1. Patient Health Questionnaire (PHQ-9). In this study, we report symptoms of depression as assessed with the PHQ-9 (Gräfe, Zipfel, Herzog, & Löwe, 2004; Spitzer, Kroenke, Williams, & Group, 1999). The PHQ-9 includes nine items, referring to the nine DSM-IV criteria for a depressive disorder. Each item is answered on a Likert scale scoring from 0 (not at all) to 3 (nearly every day). The total score ranges from 0 to 27. The severity score is interpreted as follows: scores 0 to 4 (minimal), scores 5 to 9 (mild), scores 10 to 14 (moderate), scores 15 to 19 (moderately severe), scores 20 to 27 (severe), and scores of 15 or above indicate a high likelihood of a current major depressive episode. The internal consistency has been shown to be good, with $\alpha = .86–.89$ (Kroenke, Spitzer, Williams, & Löwe, 2010).

2.4.2. Mini International Neuropsychiatric Interview 5.0 (MINI). The Mini International Neuropsychiatric Interview 5.0 (MINI) was conducted at pre time-point and 18 weeks. The MINI is a short structured diagnostic interview whose questions are linked to the mental disorders described in the DSM-IV and ICD-10 (Lecrubier et al., 1997). In this study, the German version 5.0 (Ackenheil et al., 1999) was used. The inter-rater reliability ranged from $\kappa = .76$ for panic disorder and/or agoraphobia to $\kappa = .93$ for alcohol/drug dependency, and the inter-rater reliability for major depression was $\kappa = .83$ (Lecrubier et al., 1997).

2.4.3. Semi-structured interview on bCBT. A semi-structured interview on bCBT was constructed for the purpose of the present study. The

first part of the interview was adapted from the study conducted by Lillevoll et al. (2013) and focuses on questions related to (a) the progress of face-to-face sessions and the usage of the programme, (b) the patient's attitudes towards bCBT before treatment (e.g., hopes, expectations, and doubts), (c) the patient's experiences during and after bCBT, and (d) the alliance with the therapist during bCBT. A second part contains questions related to symptom changes and experiences at different time points in bCBT (e.g., before, during, and after the treatment) (adapted from Ly et al., 2015). A third part includes questions on negative experiences and consequences (Rozental, Boettcher, Andersson, Schmidt, & Carlbring, 2015) as well as on positive events during bCBT. Finally, the interview also includes questions regarding technological aspects of the programme and topics which were not addressed during the interview.

To gain as much knowledge as possible on the patients' experiences with blended treatment, questions were open-ended. All interviews were conducted by phone due to long distances and organizational reasons. On average, the interviews took approximately 25–40 minutes. Two trained master students and two members of the research team conducted the interviews. To achieve a high standard of quality, the master students were trained in-house before conducting and evaluating the interviews. All interviewers were familiar with the study protocol and were not systematically blinded to the patient's outcome at 18 weeks.

2.5. Analysis

The main focus of the analysis was the summarizing qualitative content analysis of the semi-structured interview according to Mayring (2015). This qualitative analysis includes generating a coding system by paraphrasing relevant sections, generalization to a required level of abstraction and reduction (e.g., bundling paraphrases with similar statements or cutting semantically identical paraphrases). The mean amount of characters was 11,033 ($SD = 3027$) per interview. The smallest codeable unit was a sentence, which also included one-word statements. In a first step, one master student (AB) coded all interviews using this technique. Afterwards, the results of the general coding system were discussed and adapted together with the first author (AU) until consensus was reached. Based on the inductive character of this approach (Hayes, 2000), the constructed category system was systematically checked taking into account key words'/moderators' that have shown to be important in iCBT (e.g., therapeutic alliance, adherence, etc.) and adapted if necessary. Subsequently, all interviews were categorized by AB with the coding system a second time and tested for discrepancies between the first and the second coding procedure (Franklin & Ballan, 2001). Afterwards, the system was modified as necessary (e.g., deletion of categories with not enough codings such as "discourse with programme" or adding new categories to differentiate broad categories such as "perceived safety through observation by therapist"). The final category system contained 54 categories, which included 31 categories for advantages and 23 categories for disadvantages. Based on the final category system, all interviews were coded by a second independent researcher (LM) and inter-rater agreement was assessed. For each interview, we calculated an average Cohen's Kappa based on all 54 categories. After that, we calculated a final average based on the Cohen's Kappa values of each interview. The inter-rater agreement analysis yielded a Cohen's Kappa of .41 for all 54 categories, which can be considered as low to medium, but is sufficiently high when considering the detailed and comprehensive category system (Mayring, 2014) and the low prevalence of some categories (Feinstein & Cicchetti, 1990). Afterwards, disagreements between the two researchers (AB, LM) were discussed and regrouped until consensus was achieved. The final 33 categories (18 advantages vs. 15 disadvantages) were grouped into 6 main topics. In addition to the content analysis, we conducted an explorative *post hoc* segment analysis (Kuckartz, 2014) and categorized all the advantages and disadvantages named by the patients in specific groups with respect to the severity of their depression at baseline.

All interviews were transcribed and coded with the qualitative software MAXQDA. To ensure the quality and content of this study, we followed the COREQ checklist (Tong, Sainsbury, & Craig, 2007).

3. Results

3.1. Content Analysis

The qualitative content analysis revealed six main categories, which were (1) *interaction with the therapist*, (2) *format of bCBT*, (3) *format of the online programme*, (4) *effects of the programme*, (5) *compliance/adherence*, and (6) *self-efficacy/empowerment* (see Table I). In the following, we report the six main themes and illustrate the categories with sample statements.

3.1.1. Interaction with therapist in the face-to-face sessions. *Advantages*. For four patients

Table I. Overview of the category system of the content analysis.

Main themes	Categories: Advantages	Categories: Disadvantages
Interaction with the therapist	Feeling connected ($n = 6$) Discussing emotions and receiving feedback ($n = 4$) Support of programme usage ($n = 3$)	Lacking support with programme ($n = 3$)
Format of bCBT	Discussion about the online content with therapist ($n = 9$) Treatment efficiency ($n = 8$) Complementation of therapy and online tool ($n = 7$) Therapist as supervisor/ back-up/calming effect in the online tool ($n = 7$)	Need for additional contact in the programme ($n = 4$) Necessity of computer skills ($n = 2$) Missing motivation or energy for online programme ($n = 2$)
Format of online programme	Further advice ($n = 8$) Constant availability ($n = 8$) Identification with the programme ($n = 7$) Flexibility for individual adaptations ($n = 5$) Functionality of the programme ($n = 4$)	Limited flexibility of the programme ($n = 7$) Missing user-friendliness ($n = 6$) Missing individualization of the programme ($n = 4$) Design ($n = 2$) No identification with the programme ($n = 1$)
Effects of the programme	Clarification regarding the personal situation ($n = 7$) Cognitive restructuring ($n = 7$) Behavioural modifications ($n = 7$)	No change or deterioration of condition ($n = 5$) Transfer problems ($n = 2$) Feeling under pressure to complete modules ($n = 3$)
Compliance/ adherence	Mutual agreement between therapist and patient ($n = 7$) Implementation of programme into daily life ($n = 4$)	Missing time for discussion about online content ($n = 4$) Effort for supplemental task complementation ($n = 4$) Missing match according to the therapy goals ($n = 3$)
Self-efficacy/ empowerment	Gained ability for cognitive restructuring and behavioural modifications ($n = 6$)	None

Note: In the brackets is displayed which other patients made a similar statement (out of total 15 participants).

(26.6%), it seemed to be important to have the possibility to discuss emotions and personal problems with the therapist and for three patients (20%) it was valuable receiving feedback from a professional. For example:

> *You go into a session, you can talk about it* [problems] *and afterwards things aren't so bad anymore. These things can be stress at work, frustration and so on; we talk about it (…). And then the problem disappears.* [Patient 6, Category: Discussing emotions & receiving feedback]
>
> *I always felt like I was in good hands*. [Patient 13, Category: Feeling connected]

The interaction with the therapist was also perceived as a helpful support regarding problems with the online programme (e.g., to discuss technical problems). Furthermore, in six cases (40%), a feeling of connectedness with the therapist was mentioned. This connectedness made the patients feel comfortable and feel as though they were taken seriously and were therefore able to open up.

Disadvantages. The main problem that was reported concerning the relationship with the therapist was the missing support regarding the programme. Three patients ($n = 3$; 20%) felt left alone with the programme regarding issues such as the usage or technical problems, but also regarding the therapists' lack of involvement in the process and lack of awareness of patients' activities in the programme. Therefore the interplay between FtF session and online intervention was occasionally perceived as unsatisfactory.

> *It was as if I was doing two different things. I did the program aside from the therapy. And I think, she (therapist) didn't know a lot about the program and its content. (…) she didn't really work with it. (…) I felt left alone. I had to face it on my own.* [Patient 10, Category: Lacking support with the program]

3.1.2. Format of bCBT. *Advantages*. The benefits regarding the bCBT format involved four different aspects. Discussing the content of the programme with the therapist was an asset to receive clarification (Category: Discussion about the online content with therapist) and was mentioned by almost all patients ($n = 9$; 60%).

> *I liked that if something wasn't clear in the online program, the next time I had a FtF meeting we could discuss the difficulties that I faced. After that, it became more clear.* [Patient 2, Category: Discussion about the online content with therapist]
>
> *I went into the therapy sessions with the topics that I worked on online and asked the therapist questions. By doing so, there was a basis for a more elaborate exchange*

that might otherwise not have existed. [Patient 7, Category: Discussion about the online content with therapist]

Seven patients (46.6%) perceived the FtF sessions and the online modules as complementing each other. The consistent nature of the contents of the FtF therapy session and the online programme was mentioned.

Therapy-free periods could be used reasonably, so that I had more time to work on the online program. [Patient 13, Category: Complementation of therapy & online tool]

The online program was helpful to work on issues which were discussed in therapy at a later point in time. [Patient 9, Category: Complementation of therapy & online tool]

Furthermore, the online programme was seen as a supplementing element of the treatment, which increased the perceived treatment efficiency regarding symptom improvement. Eight patients (53.3%) were convinced that a treatment without the programme would have been more diffuse, less structured and slower in the process so that more sessions would have been necessary to achieve the same treatment progress. Additionally, the therapist was often seen as a kind of supervisor of the therapy process, by monitoring the usage of the programme, and also as a constant support in case of encountering problems with the programme.

He [therapist] *was good, but in combination with the online tool, you could approach the problems targeted (…) to achieve a greater benefit.* [Patient 5, Category: Treatment efficiency]

I liked that she was involved in it [online program]. *(…) When she saw that the curve of my graphic decreased* [e.g. mood or depression symptomatology], *she asked me about it.* [Patient 10, Category: Therapist as supervisor/back-up/calming effect in the online tool]

Disadvantages. For two patients (13.3%), the technology, especially the correct handling of the online tool, and the additional time used for the internet-based programme was a challenge. Furthermore, four patients (26.6%) mentioned that the discussions about the online programme in the FtF sessions were too time-consuming so that they did not have enough time to talk about other relevant topics. Another perceived problem was the energy and motivation to meet the requirements in both elements of bCBT (i.e., visit regular FtF sessions and completing online modules). For four patients (26.6%), a perceived shortcoming was the inability of contacting the therapist within the programme between FtF sessions.

It is a matter of finding the motivation to do it [online program] *in parallel to FtF-therapy.* [Patient 2, Category: Missing motivation or energy for online program]

The technology was a challenge for me (…). Especially to understand it at the beginning. That cost me a lot of time at home and also in discussion with the therapist. [Patient 4, Category: Necessity of computer skills]

3.1.3. Format of the online programme. *Advantages.* More than half of the patients ($n = 8$; 53.3%) appreciated the constant availability of the online tool as well as the advice given by the programme. Moreover, certain patients ($n = 7$; 46.6%) also mentioned the identification with the programme in the sense of feeling related to the online tool. A large benefit for certain patients ($n = 5$; 33.3%) was the possibility for individual tailoring through the programme, as for example the option to choose the short or long version of the instructions, the opportunity to repeat specific topics and completing modules in their own pace. Four patients (26.6%) appreciated the functionality of the whole tool as well as of the individual modules. For instance, constantly having a graphical depiction of the symptom course at disposal offered them an additional impulse for self-reflection and supported them in having a better understanding of their condition.

I liked the possibility to reread [i.e., content of the online program] *and print out things* [material of the online tool]. *I also liked that it was possible* [to be active in the program] *in my own pace.* [Patient 1, Category: Flexibility for individual adaptations]

I always have my phone with me. I virtually have my therapist in my pocket. [Patient 15, Category: Constant availability]

Disadvantages. In contrast to other established self-help tools, *deprexis* is an individualized tool which allows the user to choose from predefined multiple-choice answers to tailor the programme's content. Seven patients (46.7%) perceived the limited flexibility of the programme, in terms of choosing response categories that did not reflect their opinion, as a disadvantage. This also counts with respect to the limited automated feedback the programme could provide. Six patients (40%) perceived the handling as user-unfriendly, for instance the limitation of not being able to skip back in the programme to go to a specific page. During the treatment, four patients (26.6%) would have needed a programme that was better tailored to their personal situation and perceived the advice from the online tool as being too general and not specific enough. Moreover, three patients (20%) reported that the programme was not an incremental support to the regular FtF treatment.

The online program only referred to some parts of my problems. If someone has a clear and specific problem, the general advice from the online tool is not helpful enough. [Patient 11, Category: Missing individualization of the program]

I told her [the therapist] *that I didn't like to use it* [online program]. *(…) It did not prove to be a support or an additional companion.* [Patient 1, Category: Limited flexibility of the program]

3.1.4. Effects of the programme. *Advantages*. The positive impact of the programme could be divided into three topics. The first was the clarification of the patients' personal situation. Due to the questions and advice given by the online programme, patients became more aware of their situation, their problems and their feelings. The second topic was the change of cognitions and appraisal of situations. Six patients (40%) started to change their perspectives on their problematic situation and considered circumstances in a more positive way. The third aspect was the behavioural modification. Thanks to the programme, patients started to adapt their behaviour in daily life, engaged more often in pleasant activities or reacted differently in difficult situations with others.

At the beginning, in the first two or three weeks, I asked myself from time to time how I was feeling at the moment, because of the information I received in the online tool. [Patient 8, Category: Clarification regarding the personal situation]

Regarding activities, I started to do different things, instead of doing nothing like before the program. (…) Thanks to the program I started to do some sports and other activities which I enjoy. I think it helped that the program asked me which activities I wanted to do. [Patient 12, Category: Behavioral modifications]

Disadvantages. The analysis of the interviews showed that two patients (13.3%) experienced problems transferring the advice of the online programme into their daily life, because the suggestions of the programme were not specific or clear enough. Four patients (26.6%) also felt under pressure to work on the modules. It was experienced as demanding to take the time to work on the modules between the FtF sessions. A last negative impact of the programme that was mentioned was a negative influence on the condition of patients. For five patients (33.3%) it was frustrating to be confronted with their lack of symptom improvement while working through the programme.

The graphics frustrated me in the wrong moments. (…) You see that you're not making improvements. Then it gets even worse and it [the graph] *seems like a line of death. Depending on the momentary condition, it can enhance the negative emotions.* [Patient 11, Category: No change or deterioration of condition]

The suggestions didn't work. If you are in such a depressed state and have such a low opinion of yourself, when you read something in the program that says „you are worth it", it just doesn't help. [Patient 2, Category: No change or deterioration of condition]

3.1.5. Compliance and adherence. *Advantages*. The analyses showed that several patients and their therapists decided mutually on how to use the online programme. These mutual agreements were built based on discussions about what could be helpful, and what the next steps in the programme should be. Furthermore, patients reported that their therapist activated a next module if it was well suited for the current situation and therefore, that they were tailoring the programme content to the patient's personal needs. In addition, four patients (26.6%) described that the tasks offered within the online programme facilitated the integration of the treatment in their daily life.

Because I have different problems, we discussed what I should work on first. It was important for me to have a plan with which problem I would deal with first. Therefore, in every session we discussed which module was the most suitable and with which one I should work next. [Patient 6, Category: Implementation of program into daily life]

It was like a part of my daily life to go online from time to time. [Patient 10, Category: Implementation of program into daily life]

Disadvantages. In contrast to patients who perceived that the tasks of the online programme helped them to integrate the treatment in their daily life, four patients (26.6%) perceived them as an additional burden – another "must-do" – in their daily life. Four patients (26.6%) further mentioned that there was not enough time to discuss the online programme with their therapist in session. As a consequence, the online programme became a "second treatment" parallel to their FtF treatment. Moreover, three patients (20%) mentioned that their therapist sometimes forgot to unlock modules, so that they were not able to work on new material during the next week. These facts may have had negative effects regarding adherence to the treatment protocol, since there was no integration of online content and FtF treatment.

I had to invest more time in the therapy [bCBT]. [Patient 1, Category: Effort for supplemental task complementation]

We never really talked about the content [online tool]. *(…) From time to time, I thought I should perhaps work on a module, which I did if the therapist had activated one.* [Patient 15, Category: Missing time for discussion about online content]

3.1.6. Empowerment/self-efficacy. *Advantages*. There were six patients (40%) who mentioned

the acquired ability to change specific circumstances. These participants specifically mentioned the association between the ability to change behaviour and the online programme being a possible trigger that resulted in a change of thinking and behaviour habits. There were no disadvantages reported regarding the empowerment/self-efficacy in association with the treatment.

> *I am someone who wants to get out of it. I know I will never completely get away from it (…) but I will try to fight it. In that respect, the online tool helped me.* [Patient 5, Category: Gained ability for cognitive restructuring and behavioral modifications]
>
> *The moment I tick off the category 'no, I am not feeling good,' I ask myself what has happened that causes me not to feel good, and how can I change that, so that the next time I can avoid the situation or experience it differently.* [Patient 6, Category: Gained ability for cognitive restructuring and behavioral modifications]

Table II. Differences concerning the content in the perception of advantages and disadvantages regarding the severity level of depression at pre-assessment.

Baseline severity of depressive episode	Advantages	Disadvantages
Mild ($n = 1$)	• Discussion about online contents with therapist • Therapist as supervisor/back-up in the online tool • Treatment efficacy • Further advice online • Functionality of the online programme	• None
Moderate ($n = 2$)	• Discussion about online contents with therapist • Functionality of the programme	• None
Moderately severe/severe ($n = 12$)	• Discussion about online contents with therapist • Therapist as supervisor/back-up in the online tool • Treatment efficacy • Further advice online • Functionality of the online programme • Discussion about emotions and receiving feedback • Complementation of therapy and online tool • Constant availability	• Necessity of computer skills • Lack of additional contact possibility in the programme

3.2. Segment Analysis of Depression Severity

In a second step, a segment analysis was conducted to examine whether patients reported different advantages and disadvantages for bCBT as a function of their depression severity according to the PHQ-9 at baseline. Table II gives a detailed overview about the perceived advantages and disadvantages depending on the severity level of depression. The results show that different aspects seem to be of relevance for more or less severely depressed patients. For instance, patients suffering from mild to moderate depression (5–14 on the PHQ-9) appreciated the possibility for discussions with the therapist about the content of the online programme (e.g., as back-up, supervisor), the possibility to monitor their improvement (e.g., mood or depression symptomatology) themselves, to reflect on their progress and to have the opportunity for further advice on the online tool as well as the perceived treatment efficacy regarding symptom improvement. No disadvantages were stated in this group of patients.

Patients with moderately severe to severe depression (15–27 on the PHQ-9) appreciated the possibility to discuss personal problems and to receive FtF feedback from the therapist. Furthermore, the constant availability of the online tool as a support was mentioned as an important advantage. Moreover, patients reported that the monitoring of their symptoms by the therapist in the programme created a sense of security for them. With respect to potential disadvantages, the lack of an additional contact possibility through the online tool (e.g., integrated secured e-mail system) as well as the necessity of preexisting computer skills were mentioned.

4. Discussion

The aim of the current study was to explore participants' experienced advantages and disadvantages in a bCBT format for depression in specialized mental health care. The results of the present study indicate that patients perceived many advantages of bCBT in depression treatment. The bCBT format was mostly perceived as complementary, with the online programme and the FtF meetings being well matched. Furthermore, patients and their therapists decided on how the online programme was best used together. This is in line with the recommendations of Wentzel et al. (2016), postulating that both treatment modalities should complement each other and

decisions on how to set up bCBT should be the product of the client and therapist interaction. On the one hand, FtF meetings may compensate the insufficient tailoring and adjustment of the online programme to the patient's needs and themes as well as the limited flexibility of an online tool. Thus, individualized discussions about feelings, difficulties with the treatment and concerns are possible. Similar aspects were found in a qualitative study by Lillevoll and colleagues (Lillevoll et al., 2013). They showed that the FtF contact with the therapist was helpful to establish a trustworthy therapeutic relationship with a patient to discuss personal topics and to offer individualized feedback. Furthermore, our results reveal that the therapist was seen as an important support for dealing with the online programme and, therefore, prevented potential frustration with the online programme. This is comparable to therapists supporting patients in doing their homework. On the other hand, in combination with an internet-based programme it seems possible to outsource important treatment contents in order to provide constant availability of care, improve self-efficacy and empower people to work on their disorder by themselves. These findings are also in line with previous research (Beattie, Shaw, Kaur, & Kessler, 2009; Bendelin et al., 2011; van der Vaart et al., 2014; Wilhelmsen et al., 2013).

Several patients experienced that the bCBT seemed to be more efficient than a regular standalone FtF therapy or iCBT. These patients were convinced that a treatment without a combination of both modalities would have been less focused and more sessions would have been necessary to achieve the same results. In the present study, patients corroborated that bCBT was helpful in order to become more aware of their situation, their problem, and their feelings. Moreover, some patients experienced that the constant availability of the online programme offered them an additional impulse for self-reflection and supported them in having a better understanding of their condition. Therefore, bCBT seems to be a possibility to intensify the treatment (van der Vaart et al., 2014). Finally, most patients in our study showed a decrease in depressive symptoms and within-group effect sizes after 18-weeks of treatment were large. However, this has to be replicated in the complete sample.

Beside the advantages of bCBT, our study revealed several disadvantages. For instance, some patients mentioned a low motivation or energy to work on the online programme and the lack of individualization of the programme's content. Additionally, some patients perceived it to be difficult to meet the requirements of both elements of bCBT (e.g., doing FtF sessions and online modules). Consequently, it seems important to take patients' characteristics into account (e.g., workload, treatment goals, previous knowledge or main interest) to make optimal use of bCBT. Moreover, the perceived interplay between FtF sessions and the online tool were unsatisfactory, because some therapists were not aware about the patient's activities in the online programme. Therefore, some therapists used the online programme more as an add-on instead of integrating it into the face-to-face treatment. The diverging statements of the patients point to the importance of the therapist involvement in bCBT. Therapists might need to take an active role in the blending process for some patients, for example as indicated by the segment analysis in less severely depressed patients by unlocking the next module faster. High workload and institutional restrictions (e.g., providing no additional time for managing the online content) might have a negative impact on how well blending can be implemented.

Interestingly, the segment analysis showed that different aspects of bCBT seem to be relevant for different patients. For instance, patients with milder forms of depression appreciated the possibility to discuss issues (e.g., content of the online tool) in FtF or to monitor their improvement themselves and to reflect on their progress. Patients with more severe forms of depression in turn appreciated the possibility to discuss personal feelings and to receive FtF feedback by the therapist. In addition, the constant availability of the programme and the monitoring by the therapist created a sense of security.

Our study has a number of limitations that need to be considered. First, the interviews were conducted via telephone; therefore, some important information might have been missed (e.g., missing nonverbal information). Second, another limitation is the rather small sample size for the segment analyses in which the distribution of the different severity levels was not equal. Third, the most important limitation is that the results cannot be regarded as representative for all individuals receiving bCBT. For instance, it is possible that a selection-bias in the recruitment process existed, and only individuals who were already open-minded and motivated to complete such a treatment accepted to undergo bCBT. Fourth, because patients in the present study were not blind to the research questions of the current study and interviews were conducted by phone, various factors such as social desirability might have influenced their responses. In addition, our study sample consisted of only one patient who experienced symptom deterioration on the PHQ-9. Therefore, other themes might have emerged in people who could not benefit from the treatment.

Our findings leave room for future lines of research. First, it would be interesting to assess whether therapist experience regarding bCBT has an effect on patients' perception of advantages and disadvantages of bCBT. Because bCBT is a new development, it was the first time for all therapists involved to deliver bCBT. Second, future studies have to investigate if a systematic way of blending, as in the present study, has a negative effect on the therapeutic alliance. There is recent evidence suggesting that the quality of the alliance is not perpetuated by an adjunctive online intervention (Berger, Krieger, Sude, Meyer, & Maercker, 2017). However, this finding has to be corroborated in studies with a more systematic way of blending and larger samples.

5. Conclusions

The findings of the present study revealed both advantages and disadvantages of bCBT, though most of the patients perceived the combination of online and FtF sessions as complementary. This indicates that, overall, the use of both treatment modalities might balance out missing aspects of each setting. Most patients in our study were able to improve their depression level. The results also suggest that different perceived advantages as well as disadvantages of bCBT exist as a function of the level of severity of the depressive episode. Thus, it might be promising to tailor the blending of iCBT and FtF treatments to the depression level of the patients in the future. It is important to bear in mind that the results of this study cannot be generalized due to the small sample size. However, the study gives first indications about patients' perceived advantages, disadvantages and problems of bCBT, which may help to improve bCBT in the future.

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